U.S. EPA Office of Research and Development

Board of Scientific Counselors Subcommittee

Safe and Sustainable Water Resources Research Program

Virtual Meeting on May 26-27, 2021

Agenda

May 26, 2021

Time (EDT)	Topic		Presenter
11:45-12:00	Sign on and Technology Check		
12:00-12:15	Welcome and Opening Remarks		Tom Tracy (DFO) Joseph Rodricks (SSWR BoSC Chair) Robert Blanz (SSWR BoSC Vice Chair)
12:15-12:30	ORD Welcome		Bruce Rodan (Associate Director for Science)
12:30-12:40	SSWR Overview and Charge Questions		Suzanne van Drunick (SSWR National Program Director)
12:40-1:15	ORD Center and Grants Overview		Greg Sayles (Director, CESER) Rusty Thomas (Director, CCTE) Mary Ross (Director, OSAPE)
1:15-1:25	Water Treatment and Infrastructure		Chris Impellitteri (Associate NPD, WTI Topic Lead)
1:25-4:30	Overview of Research Area 7: *Drinking Water Treatment and Distribution Systems*		Hale Thurston (ACD, CESER)
	1:30-2:00	Output 1: Resources and tools for characterizing and mitigating lead and copper release in drinking water distribution systems and premise plumbing	Darren Lytle (ORD, CESER) BoSC Q&A
	2:00-2:30	Output 2: Best practices, tools, and information for assessing and controlling pathogens and biostability in drinking water systems, managing disinfectant residuals, and minimizing DBPs	Eric Villegas (ORD, CEMM) BoSC Q&A
	2:30-3:00	Output 3: Analytical methods, occurrence, health effects, and treatment assessments to aid regulatory decision-making	Jane Ellen Simmons (ORD, CPHEA) BoSC Q&A
	3:00-3:15	Break	

	3:15-3:45	Output 4: Resources and tools toward a systems approach for maintaining drinking water infrastructure performance and integrity	Regan Murray (ORD, CESER) BoSC Q&A
3:45-4:30	BoSC Discussion of Charge Question 1		Joseph Rodricks (SSWR BoSC Chair) Robert Blanz (SSWR BoSC Vice Chair)
4:30-5:00	Overview of Research Area 11: *Technical Support*		Ben Packard (ORD, OSAPE)
	4:35-5:00	Output 1: Technical support for water treatment, analytical methods, and risk assessments (Informational only – no charge question)	Craig Patterson (ORD, CESER) Michelle Latham (ORD IOAA) BoSC Q&A
5:00-5:15	Public Comments		Tom Tracy (DFO)
5:15-5:30	Wrap up		Joseph Rodricks (SSWR BoSC Chair) Robert Blanz (SSWR BoSC Vice Chair)
5:30	Adjourn		

May 27, 2021

Time (EDT)	Topic		Presenter
11:45-12:00	Sign on and Technology Check		
12:00-12:10	Welcome – Day 2		Tom Tracy (DFO) Joseph Rodricks (SSWR BOSC Chair) Robert Blanz (SSWR BOSC Vice Chair)
12:10-12:20	ORD Centers Overview		Tim Watkins (Director, CEMM) Jamie Strong (Associate Center Director, CPHEA)
12:20-1:30	Overview of Research Area 9: *Wastewater and Water Reuse*		Ann Grimm (ACD, CEMM)
	12:25-1:05	Output 1: Analytical methods, exposure and effects assessment processes, and tools for wastewater and fit-for-purpose water reuse Output 2: Treatment technologies for wastewater and fit-for-purpose water reuse	Jay Garland (Associate Director, CESER)
1:05-1:30	BoSC Discussion of Charge Question 2		Joseph Rodricks (SSWR BoSC Chair) Robert Blanz (SSWR BoSC Vice Chair)
1:30-1:45	Public Comments		Tom Tracy (DFO)
1:45-2:00	Break		

2:00-3:45	Overview of Research Area 10: *Stormwater Management*		Ann Grimm (ACD, CEMM)
	2:05-2:20	Output 2: Stormwater Management as a Resource for Enhanced Recharge, Capture, and Use (Informational only – no charge question)	John Johnston (ORD, CEMM) BoSC Q&A
	2:20-2:45	Output 1: Planning, Implementing, and Monitoring Stormwater Management Practices	Matt Hopton (ORD, CESER)
2:45-3:15	BoSC Discussion of Charge Question 3		Joseph Rodricks (SSWR BoSC Chair) Robert Blanz (SSWR BoSC Vice Chair)
3:15-3:30	Break		
3:30-4:30	Charge Question Breakout Groups (Committee members will be preassigned to specific charge questions)		BoSC & ORD
4:30-5:15	Charge Question Breakout Group Reports (15 mins each report)		Charge Question Leads
5:15-5:30	Next Steps		Joseph Rodricks (SSWR BoSC Chair) Robert Blanz (SSWR BoSC Vice Chair) Suzanne van Drunick (NPD, SSWR) Joe Williams (Principal Associate NPD, SSWR) Tom Tracy (DFO)
5:30	Adjourn		

Charge to the Board of Scientific Counselors

Subcommittee for the Safe and Sustainable Water Resources Research Program

Water Treatment and Infrastructure

Introduction

The mission of the EPA Office of Research and Development (ORD) is to provide the best available science and technology to inform and support public health and environmental decision-making at Federal, state, tribal, and local levels. This leading-edge research addresses critical environmental challenges and anticipates future science needs. Through 2018-19, ORD benefited from input from the Board of Scientific Counselors (BOSC) on the research topics and outputs for six Strategic Research Action Plans (StRAPs):

- Air and Energy (A-E)
- Safe and Sustainable Water Resources (SSWR)
- Sustainable and Healthy Communities (SHC)
- Chemical Safety for Sustainability (CSS)
- Homeland Security Research Program (HSRP)
- Health and Environmental Risk Assessment (HERA)

Taking into consideration BOSC input on the StRAPs, ORD worked closely with its partners in EPA programs and regions, states, and tribes to identify specific products that address their priority needs. This engagement process was conducted through Research Area Coordination Teams (RACTs), drawing membership from across the Agency, and included a pilot program to directly engage state scientists and a formal Tribal Consultation. Following this detailed planning phase, ORD is now transitioning from the "what and when" to the "who and how", i.e., from planning to implementation. ORD's request for BOSC input is now focused on the implementation phase. The objective is to have each BOSC subcommittee cover the full portfolio of the relevant research programs within a two-year BOSC review cycle.

The current BOSC review is focused on the SSWR Water Treatment and Infrastructure (WTI) Topic, one of the three inter-related topics in the SSWR research portfolio. The WTI Topic consists of five Research Areas (RA): RA7 – Drinking Water and Distribution Systems; RA8 – Per- and polyfluoroalkyl substances (PFAS); RA9 – Wastewater/Water Reuse; RA10 – Stormwater Management; and RA11 – Technical Support. **Please note that RA8-PFAS will not be covered in this BOSC Sub-Committee review because the entire ORD PFAS research portfolio will be reviewed by the BOSC Executive Committee in a separate review**. The purpose of this review is to receive the Subcommittee's feedback on the following three charge questions related to drinking water and distribution systems, water reuse, and stormwater.

Charge Question 1: Drinking Water

Q.1: The SSWR research program is implementing drinking water and distribution system research focused on lead/copper control, management of disinfection by-products (DBPs), and opportunistic pathogens. These issues are especially challenging for small systems and some environmental justice communities.

What suggestion(s)/recommendation(s) does the Subcommittee have on ORD's implementation of its drinking-water and distribution research, and in particular on how these research activities can be comprehensively integrated to ensure safe disinfectant levels, while minimizing or eliminating exposure to lead, opportunistic pathogens, and DBPs in small treatment and distribution systems and in disadvantaged communities?

Charge Question 2: Water Reuse

Q.2: ORD water reuse researchers have worked closely with other organizations (e.g. Water Research Foundation) to avoid duplicative research, especially in large municipal direct potable reuse systems. This coordination led to SSWR implementing research focused on non-municipal sources of wastewater (e.g. industrial, agricultural) and decentralized non-potable end uses that can contribute to increased resiliency of water resources, especially in areas facing increased frequency, intensity, and duration of higher temperatures and drier climate patterns.

Please comment on the implementation of ORD's water reuse research, and what suggestion(s)/ recommendation(s) does the Subcommittee have regarding SSWR's water reuse research for helping to innovatively augment water supplies and improve resiliency by identifying promising alternative water sources?

Charge Question 3: Stormwater

Q.3: Stormwater management approaches can decrease stormwater runoff to wastewater treatment systems (combined sewer systems) and stream discharges (municipal separate storm sewer systems). Consequences from combined sewer systems frequently affect lower-income areas in urban settings. These effects may be exacerbated in areas subjected to increased intensity, duration, and frequency of extreme precipitation events.

In addition to evaluating ORD's stormwater research activities, what suggestion(s)/recommendation(s) does the Subcommittee have to improve the utility of these research activities to provide integrated decision-support tools for stormwater management in disadvantaged communities?